

Name: _____
USN Number: _____
Mobile Number: _____

SITETRACKER

INTERNSHIP PROGRAMMING EXCERCISE (2025)

General Instructions

1. This questionare consists of 2 problems and you are expected to solve both.
2. You have 60 Mins of time in total.
3. Use any OOPS language (c++, java, python, javascript) to write code.

Problem 1: Merge Overlapping Meetings

Description: Given meeting time intervals, merge all overlapping intervals and output the consolidated schedule.

Input Format:

- First line: Integer n (number of meetings)
- Next n lines: Two space-separated integers start and end

Output Format:

- Each merged interval on a new line: start end (sorted by start time)

Sample 1:

```
Input:  
4  
1 5  
3 7  
8 10  
9 12
```

```
Output:  
1 7  
8 12
```

Sample 2:

```
Input:  
7  
1 10  
2 6  
5 15  
18 20  
21 25  
30 40  
35 45
```

```
Output:  
1 15  
18 20  
21 25  
30 45
```

Problem 2: Find Heavy Users

Description: Given bank transactions, find all users who made 3 or more transactions within any 60-second window.

Input Format:

- First line: Integer n (transactions)
- Next n lines: time user_id (space-separated, transactions sorted by time)

Output Format:

- Space-separated list of user IDs (unique, sorted ascending)

Sample 1:

Input:

```
6
1 101
30 101
59 101
65 101
100 102
101 102
```

Output:

```
101
```

Explanation: User 101 has transactions at times 1, 30, 59, 65.
The 60-second window [5, 65] contains 3 transactions (30, 59, 65).

Sample 2:

Input:

```
8
10 201
30 201
50 201
70 201
5 202
25 202
45 202
90 203
```

Output:

```
201 202
```

Explanation:

- User 201: 4 transactions at 10, 30, 50, 70 within [10,70] (60s window)
- User 202: 3 transactions at 5, 25, 45 within [5,65] (60s window)
- User 203: Only 1 transaction, not flagged